

## **Adsorption recovery and preconcentration of Ni(II), Zn(II), and Cd(II) on nitrocellulose membranes modified with N-acylamidophosphates**

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### **Abstract**

N-(Thio)phosphorylated (thio)carbamides and (thio)amides are proposed as modifiers of polymer nitrocellulose membranes for the adsorption preconcentration of Ni(II), Zn(II), and Cd(II) from aqueous solutions. The binding constants of metal ions with the immobilized reagents are 1.5-2.5 times higher than those with monomer ligands in solution. The preconcentration coefficients are 1950-3500. A procedure was developed for the adsorption preconcentration and recovery of Ni(II), Zn(II), and Cd(II) as complex compounds, using nitrocellulose membranes modified with N-(thio)phosphorylated thiocarbamides and thioamides. © 2010 Pleiades Publishing, Ltd.

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